

**USE OF VIDEOCONFERENCING AND E-MAILING SYSTEM  
IN COMPUTERISED ACADEMIC LIBRARIES  
IN NIGERIA: A PILOT STUDY.**

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**ABSTRACT**

*The study investigated video conferencing and e-mailing system in computerized academic libraries in Nigeria using Niger State as pilot study. The study aimed at investigating methods used in acquiring reference materials and developing video conferencing and e-mailing system using three academic libraries in Niger State as pilot study. Four research questions were used in line with the methods of acquisition of references sources, development of video and email system as well as advantages and challenges to use of video conferencing and emailing system in computerized academic libraries in Nigeria. A combination of descriptive survey research and experiment were used for the study. The target population of twenty (20) and sample size of ten (10) reference services staff from the libraries of the Federal University of Technology Minna, Ibrahim Badamasi Babangida University Lapai and Niger State College of Education Minna were used for the study respectively. Questionnaire and practical demonstration were used in data collection. Close-ended questionnaire was designed and validated by the experts in ICT and reference sections of the academic libraries. Copies of the modified questionnaire were administered on staff of reference services sections of academic libraries by the researchers. Laptop computers were located at both ends (about 100 meters away from each other) to enable communicators exchange ideas and view each other during reference service session. Descriptive statistics (simple percentages) was used to analyze the data. The result of the study showed that relevant reference materials were acquired and conveyed to academic libraries through postal order. The study further revealed that the communicators were able to view and exchange ideas with each other through laptop computer. Majority of the respondents indicated that the use of videoconferencing and e-mailing system in academic libraries will make interactive communication system and document delivery faster. The study recommended amongst that internet connectivity should be improved upon so that users and reference services staff can communicate effectively through videoconferencing and e-mailing system for effective provision of reference services in the academic libraries.*

**Keywords**

ICT, Reference services, Videoconference, E-mail, Academic libraries, Niger State, Nigeria.

## **Introduction**

Libraries and Librarians all over the world are regarded as developers, organizers, custodians and disseminators of current, relevant, reliable and timely information and information resources based on user's needs. However, the past centuries witnessed the acquisition, processing and dissemination of information in traditional form of library services which include manual form of selection and acquisition, organization and circulation of information resources as well as provision of reference sources and services in the reference section of the library. It is a physical or virtual interaction between the reference staff and user in order to provide and obtain a definite piece of information at the right time. The user presents queries before the reference staff and in turn a definite piece of information is offered to the client. To achieve this, both hardcopy and e-reference sources are made available in library and online respectively. These reference sources include but not limited to dictionary, encyclopedia, bibliographies, biographical and statistical sources, indexes, abstracts, e.t.c.

With the advent of Information Communication Technology, library services have been transformed in such a way that information can be accessed at door step. This is being achieved through online selection, ordering and acquisition, public access catalogue, reference services, e.t.c (Ameh, 2007). In order to offer efficient reference services so as to meet user's information needs within a shortest period, the Public Service

Department (PSD) of the National Library of Nigeria offers "a cost effective access to a broad range of information on the web" p.37 (Ameh, 2007).

However, it is worthy to note that the application of computer and information technology has transformed the approaches to the provision of reference services which include: e-mail, chart reference, web contact center, video conferencing, teleconferencing and video conference (Onuoha, 2012).

The provision of reference services in academic and digital libraries is negatively affected by certain factors which include but not limited to: lack of self-confident, level of education, poor working conditions, human relations, funds, erratic power supply e.t.c (Eze, Ogbo and Ameh, 2011; Onuoha, 2012).

Niger State which was use as pilot study was created in 1976 and carved out from defunt North western state (Sokoto). As at now, the state has 25 Local Government Areas and is within the three senatorial zones namely, Niger South, Niger East and Niger North. The State is blessed with 14 institutions of higher learning (Federal and State universities, Polytechnics, Colleges of Education, Fisheries, Technology and Wildlife Management as well as state Colleges of Agriculture, Nursing, Midwifery, Health Technology, and Institute for Legal and Administrative studies-all located within the three senatorial zones of Niger State (Saka and Garba, 2014). It has been observed that most academic libraries in Nigeria and Niger State in particular are still using traditional form of providing

reference services.

### **Statement of the Problem**

Academic libraries are expected to not only acquire and make available vast amount of information resources but also they should meet users' information needs. This can be achieved through careful selection and acquisition of library collection including reference sources, provision of quick reference services, through face – to – face, e-mail or voice/ video conference. Unfortunately, researchers' observation showed that most academic libraries in Nigeria and Niger State in particular have not been offering efficient online reference services as expected. One can then wonder what have been responsible for this setback. This study examines the use of e-mail and video conference in the provision of reference services in Nigerian academic libraries through pilot study.

### **Research Objectives**

- i. What methods do academic libraries use to acquire materials within the network? Too broad, Academic Libraries in Nigeria.
- ii. What methods do academic libraries used in developing

videoconferencing and e-mailing system?

- iii. What are the advantages of the two systems?
- iv. What are the challenges of /and solutions to effective use of the two system?

### **Review of Empirical Studies**

Anozie and Usman (2010) investigated internet and reference services in National Library of Nigeria, Abuja using 200 users in reference and users department. The result showed the availability of internet reference service as 50% of the respondents were aware of the e-mail service. Ukpebor (2011) reported that Engineering students and lecturers in Edo state, Nigeria do not access internet from their faculties due to network problem. E-mail was regarded as the most popular brand internet service. Slow internet access was the major problem though it was time saving.

Ossai-Ugbah and Ogunrobi (2011) conducted a research to find out whether academic librarians in Nigerian Universities have internet connectivity and for library services was poor. Suberu (2015) investigated the use of electronic resources and services by academic librarians of Ahmadu Bello University Zaria, Nigeria. The result showed that computers, flash drive, internet service and electronic books and journals were available and that majority of academic librarians used the e-resources on daily basis as they were aware

of library websites.

Oyedum, Abedoh, Saka and Alhassan(2015) examined the impact of electronic resources on university library services using Federal University of Technology Minna and Ibrahim Badamasi Babangida University Lapai as case study. The study revealed that e-resources and online academic work had made some impact on the library services such as provision of adequate services from e-books, e-journal, and internet connectivity respectively.

From the above review of empirical studies, there are missing/gaps which needs to be filled by the present study in the areas of online method of acquisition, developing video conference and email system as well as the advantages of/challenges of the two systems. The present study use experiment/ demonstration to conduct online reference

services.

### **Methodology**

Descriptive survey was used for this study with population of 20 staff in the reference services section of the three academic libraries in Niger state which are used for pilot study with special reference to computerized library network of reference services. An experiment (practical demonstration) was used to conduct online reference services by placing two laptop computers hundred metres away from each other whereby two communicators from both ends exchange ideas. The table below contains the population distribution of staff in reference services section in the three academic libraries in Niger State in the North-Central geo-political zone of Nigeria.

**Table 1: Population of the Study**

S/No	Name of Institution	Name of Academic Libraries	Number of staff in Reference Services Section
1	Federal University of Technology, Minna	Ibrahim Badamasi Babangida	10
2	Ibrahim Badamasi Babangida University, Lapai	Abubakar Gimba	5
3	Niger State College of Education, Minna	Yahaya Madaki	5
	<b>Total</b>		<b>20</b>

Though it is a survey research and pilot study, 10 reference services staff was randomly selected from the 20 reference services staff in three academic libraries. Researchers designed and administered 10 copies of close – ended questionnaire on the 10 reference services staff. The designed questionnaire comprised

sections A, B, C and D: (A-personal data of the respondents, B- methods of acquiring information materials, C - developing video conference and e-mailing system, D - challenges/ solutions to effective use of the tools respectively.

### Practical Demonstration/Experiment

Based on the topic of research, the design of the project to develop software was contracted out to a system analyst. Practical demonstration was carried out. Two computers with software installed at both ends about 100 meters away from each other were used. Webcam was used to integrate the camera and laptop. The software enables the communicators (reference services staff and user) to view each other on the screen. Camera and laptop contain video that enables the two communicators (reference staff and user)

not only see but also receive calls from each other. This process enables user to send requests/query(ies) through verbal communication or through online (e-mail). Descriptive statistics (frequency and percentages) was used to analyze the data.

### Result and Discussion

All the ten copies of questionnaire administered on reference services staff were dully completed and returned in usable form. The result of the responses to research questions are presented in table 3, 4, 5 and 6 respectively.

**Table 2. Educational Qualification of Respondents**

<b>Educational. Qualification</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Ph.D (Lib and Information Science)	—	—
M.LS	—	—
First Degree in Lib and Information Science	1	10
HND Lib and Information Science	4	40
ND/OND/DLS Lib and Information Science	5	50
Total	10	100

It was discovered that the reference services section of the three academic libraries were manned by Para-Professional staff i.e. holders of Diploma and Higher Diploma in Libraries Science. This showed that while the professional staff discharges less job, the para-professionals perform the bulk of the entire library/routine duties in the reference

section of the academic libraries. Below are tables use to analyzed and present data thereby answering the four research questions. Research question 1. What methods do academic libraries used in acquiring information resources within network?

**Table 2: Methods used in the acquisition of reference sources within academic library network**

Questions	Response	Frequency	Percentage (100%)
1. Is there a functional reference section in this library	Yes	10	100
	No	0	0
<b>Total</b>		<b>10</b>	<b>100</b>
2. How do you source for your reference materials/answers whenever a user seeks for information that is not available in the parent library?			
a. Browse through the internet?	A	8	53
b. Go to another library location for help?	B	2	18
c. Make a telephone call to another librarian?	C	2	18
d. Order for new reference material?	D	3	20.00
e. Link to a network	E	0	0
f. Send a mail to another library	F	0	0
<b>Total</b>		<b>15</b>	<b>100</b>
3. Have you ever had a referral of reference question	Yes	7	70.00
	No	3	30.00
<b>Total</b>		<b>10</b>	<b>100</b>
4. How did you get the relevant reference material conveyed to your library?			
a. Through postal order?	A	7	64
b. By travelling to the library location?	B	3	27
c. Through e-mail service	C	1	9
<b>Total</b>		<b>11</b>	<b>100</b>
5. Do you need to pay some fee for the delivery of the material?	Yes	6	60.00
	No	4	40.00
<b>Total</b>		<b>10</b>	<b>100</b>
6. Dose the user pay for this service (the information that is collected from another library )	Yes	2	22
	No	7	78
<b>Total</b>		<b>9</b>	<b>100</b>

This table contains four sub-questions with their corresponding data. All the respondents indicated to have a functional reference service (adequate reference collecting e-mail services e.t.c). Majority of the respondents source their reference materials /answers by browsing through internet. Out of the 10 reference staff studied, 7(70%) claimed to have given referral of reference questions.

Practical demonstration by the communicators through the use of two laptops located 100 metres away from each other on the screen showed that through videoconference, user and reference staff were able to view each other and have audio interaction as well. This will further enable user to send request\query through e-mail to academic libraries within the network.

It was discovered from the table that 7(64%) of the respondents indicated to

convey relevant reference materials to their library "through postal order". This means that despite the prominence given to ICT, print/ hard copies of the information resources were still ordered and acquired by the academic libraries, as they need to pay some fee for the delivery of the reference materials. The academic libraries under study indicated that they don't charge users (any fee) for the delivery of reference materials/services from other libraries within the network, thus libraries are non-profit oriented organization.

On the frequency of the days to access other libraries within the network, there were eight respondents, out of which four indicated that they used seven days in a week to visit other libraries within the network. This has shown that half of the reference services staff used to access other libraries on daily basis to meet up with users' information needs.

*Research question 2: What are the methods/procedures for developing video conference and e-mail systems?*

The table 3 presents methods used by network libraries to develop video conference and e-mailing system

**Total 3: Methods for developing videoconferencing and e-mailing system**

S/No	Question	Response	Frequency	Percentage (%)
1	Are you computer literate	Yes	6	67
		No	3	33
	<b>Total</b>		<b>9</b>	<b>100</b>
2	Have you ever used videoconference to communicate another librarian within or outside your library?	Yes	1	11
		No	8	89
	<b>Total</b>		<b>9</b>	<b>100</b>
3	Have you ever receive/send a mail from/to another librarian within or outside your library	Yes	4	40.00
		No	6	60.00
	<b>Total</b>		<b>10</b>	<b>100</b>
4	Will you like to acquire reference materials without visiting the physical building of the other library?	Yes	4	34
		No	5	66
	<b>Total</b>		<b>9</b>	<b>100</b>
5	Do you think videoconferencing will be able to make interactive communication system among networking libraries?	Yes	4	80.00
		No	1	20.00
	<b>Total</b>		<b>5</b>	<b>100</b>
6	Do you think electronic mailing will make document delivery faster among network libraries?	Yes	7	87
		No	1	13
	<b>Total</b>		<b>8</b>	<b>100</b>

In answering question on methods and procedures for developing videoconferencing and e-mailing systems, six sub-questions were raised. Over half of the respondents claimed to be computer literate though eight (8) of them were of the opinion that they have never used videoconference to communicate another reference services staff within or outside their library. It is an indication that there were no facilities for videoconference in academic libraries. However very few of the respondents indicated to have ever

received and send an e-mail from/to another librarian within or outside their libraries. This show that not all academic libraries have functional reference services section as indicated on table 2 sub-question 1. Five of the respondents indicated that they don't want to acquire reference materials without going to the library. That is, they don't believe with virtual library as physical building and printed resources are still being given prominence in this era of ICT.



Research question 3: What are the advantages of videoconferencing and e-mailing system for academic library network?

**Table 4: Advantages of videoconference and electronic mail for library network**

Question	Responses	Frequency	Percentage (%)
1. Do you consider videoconferencing and electronic mailing system to be more advantageous than the other systems of communication and information delivery?	Yes	8	100
	No	0	0
Total		8	100
2. Which of the following do you consider as an advantage of videoconference and electronic mailing? ( <i>tick as many as possible</i> )			
a. Makes communication among networking more interactive	A	2	8
b. It enable reference librarian to send reference question anytime of the day to the other library(ies)	B	3	12.00
c. Fast document delivery	C	7	30.00
d. It save users time	D	6	25.00
e. More convenient to use and operate	E	6	25.00
Total		24	100

All the respondents considered videoconference and e-mail system to have more advantages over other systems of communication and information servicedelivery. Majority of the respondents indicated that both tools enhances fast document delivery, saves

user's time and more convenient to use and operate.

Research question 4: What are the challenges and solutions to theuse of videoconferencing and electronic mailing system?

**Table 6: Challenges of/and solutions to videoconferencing and e-mailing system in academic library network**

Questions	Response	Frequency	Percentage (%)
1. What are the problems associated with videoconferencing and electronic mailing system? ( <i>tick as many as possible</i> )			
a. Inadequate IT skills to make use of the system interactive.	A	7	21.21
b. Capital intensive of the system	B	7	21.21
c. Poor network connectivity which makes accessibility difficult	C	9	27.27
d. Erratic power supply	D	10	30.30
Total		33	100
2. How do you think the existing video conference and electronic mailing system can be improved for better performance?			
a. Training should be organized for librarian on how to handle the new technology	A	10	28.57
b. Staff should be willing to learn the new technology	B	9	25.57
c. Internet connectivity should be improved	C	4	11.42
d. Relatively cheaper means of developing the system should be sought	D	6	17.14
e. Other sources should be used to generate power	E	6	17.14
Total		35	100

It revealed that poor network connectivity, inadequate IT skills and capital intensive of the system were the challenges to the use of videoconference and e-mail in academic library network. Solutions to the above enumerated challenges include: organizing training program and staff willingness to learn the new technology.

### Discussion of Results

Response to research question one found that majority of respondents source their reference materials/answers by browsing through internet, though relevant materials

were convey to library through postal order. Half of the respondents visit other networked libraries on daily basis. These findings corroborate those of Anozie and Usman (2010) and Zuberu (2015) as these set of researchers discovered the availability of reference services and respondents' awareness of e-mail service and library websites respectively. Response to research question two found that majority of the respondents never used videoconference to communicate another librarian within or outside their libraries. They also indicated to have acquired

materials without visiting the libraries, thus revealing that the academic libraries use either e-mailing system or inter-library loan facilities. These findings support that of Ukpebor (2011) but disagree with the findings of Ossai-Ugbah and Ogunrobi (2011) and Zuberu (2015) respectively. The former discovered inaccessibility to internet due to network problem. The last two sets of researchers found that academic libraries used e-mail more for professional correspondence and e-resources on daily basis respectively.

Research question three found that the use of videoconference and e-mail for library network enhances fast document delivery, time-saving and more convenient to use and operate. This finding does not fully corroborates that of Ukpebor (2011) as the researcher discovered that the internet was time saving. Research question four discovered erratic power supply as the major problem. This finding contradicts those of Anozie and Usman (2010), Ukpebor (2011) and Ossai-Ugbah and Ogunrobi (2011) respectively. Anozie and Usman (2010) discovered availability of internet service, Ukpebor (2011) found that accessibility to internet was slow, while Ossai-Ugbah and Ogunrobi (2011) discovered poor use of e-mail for library-based services respectively.

### **Conclusion**

There was functional reference services section in academic libraries investigated and used internet. Despite this ere of information, relevant materials were conveyed to academic libraries through postal order. However, respondents have never used e-mail and videoconference to

communicate other reference services staff within or outside their libraries even though the two tools could be used for interactive communication and fast document delivery. Various challenges such as network connectivity can only be solved through training and willingness of staff to use the new technology.

### **Recommendations**

The study recommends that:

1. The Management of institutions of higher learning in conjunction with academic libraries in Nigeria should ensure that their libraries are networked so that videoconferencing and e-mailing system can be conveniently carried out even at users doorstep.
2. Management of academic libraries in Nigeria should ensure that there is efficient academic library network to further enhance effective and efficient fast document delivery.
3. Every academic library in Nigeria should be equipped with stand-by generating plants for enhanced reference and information service delivery.
4. Management of academic libraries in Nigeria should ensure that electronic reference sources are made available in the databases of academic libraries in Nigeria.

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